## To Our Shareholders:

We are pleased to report that Brush Wellman Inc. posted substantial increases in both sales and earnings for the first quarter of 1988, compared with the first quarter last year.

#### **Financial Review**

Net income of \$7.9 million for the first quarter of 1988 represents an increase of 23 percent from the \$6.5 million earned during the same period last year. Earnings per share for the first quarter of 1988 reached 43 cents, compared with 34 cents per share earned in the first quarter of 1987, an increase of 26 percent. First quarter 1988 sales were \$90 million, an increase of 23 percent from first quarter sales of \$73 million in 1987.

Worldwide sales of beryllium alloys achieved an all-time high in the first quarter of 1988. The significant increase is primarily due to the demand generated by electronic-related markets. As a result of the expansion program initiated in 1984, we are able to maintain lead times averaging six to eight weeks on orders for these products. We are currently operating at about 75 percent of capacity.

All product lines reported sales increases from last year except beryllium metal for which sales were unchanged due to flat demand from defense-related markets.

We have made progress toward increased productivity and yield at the metal systems and beryllia ceramic operations that should have a positive effect on profits in the second half of 1988. Although the long-term outlook for beryllia ceramic products remains good, operating difficulties negatively impacted earnings for the first quarter of 1988. Operations at the Metal Systems Division have improved after a disappointing performance in 1987.

#### **Annual Meeting**

The 1988 Annual Meeting of Shareholders was held in Cleveland on April 26. Shareholders re-elected Robert M. McInnes and Henry G. Piper to the Board of Directors. William P. Madar, President, Chief Executive Officer and Treasurer of Nordson Corporation, was elected to the Board of Directors. Morris H. Wright retired from the Board of Directors after nearly thirty years of distinguished service.

Shareholders also confirmed the appointment of Ernst & Whinney as independent auditors for the Company.

#### **Capital Requirements**

We have the financial resources to support programs that we believe to be fundamental to maintaining our leadership position and to achieve long-term growth for our shareholders.

Capital expenditures for 1988 are estimated to be about \$25 million. Approximately half of the expenditures will be for capacity additions and expanded capabilities, including equipment associated with new products and new technology. The remaining amount is for replacement and

environmental projects, including a \$5 million waste water treatment facility at the Elmore, Ohio refinery.

During the quarter, Brush Wellman and Metals Engineering Co. signed a letter of intent whereby Brush Wellman will purchase for cash all the outstanding shares of Metals Engineering. The acquisition is contingent upon completion of a definitive agreement. Metals Engineering produces contoured metal strip, including contoured beryllium copper strip, and serves makers of electrical and electronic components.

The Board of Directors has approved the divestiture of the small Canadian subsidiary of Williams Gold. The unit's products and its markets are generally unrelated to those of Brush Wellman. The financial consequences of this action are not expected to be material.

#### Organization

In April, Dr. Jere H. Brophy was named to the new position of Vice President of Technology. He will direct his activities toward identifying and developing new uses for beryllium and related engineered materials. Prior to joining Brush Wellman, he was vice president, engineering at TRW Engine and General Components Group of TRW Inc.

#### Outlook

We are optimistic that 1988 earnings should be an improvement over 1987. We are currently experiencing strong demand from electronic-related markets that account for over half of our total business. Although beryllium metal sales are less robust than expected, softening defenserelated demand is offset by growth of other products.

The long-term outlook for our key end markets continues to be good. Expansion of these markets, combined with our investments in technology and equipment, should provide Brush Wellman with opportunities for growth as a supplier of high reliability engineered materials.

Kaymond a, Foos

Raymond A. Foos

President and Chief
Executive Officer

Henry G. Piper Chairman of the Board

Henry of Tiper

April, 1988

# Consolidated Statements of Income (Unaudited)

(Dollars in thousands except share and per share amounts)         April 3, 1988         March 29, 1987           Net sales         \$ 89,961         \$ 73,077
Net sales \$ 80 961 \$ 73 077
Ψ 03,301 Ψ 70,077
Costs and expenses:
Cost of sales
Selling, administrative and general expenses
Research and development expenses
Exploration expenses
Interest expense
Other — net
<b>76,971</b> 61,683
Income Before Income Taxes         12,990         11,394
Income taxes
Net Income
Net income per share of Common Stock
Cash dividends per common share
Weighted average number of common shares outstanding

# Consolidated Statements of Changes in Financial Position (Unaudited)

	First Quart	ter E	nded		
	April 3,	M	arch 29,		
(Dollars in thousands)	1988		1987		
Funds From Operations					
Net income	\$ 7,924	\$	6,461		
Depreciation, depletion and amortization	5,129		4,882		
Amortization of mine development	1,240		1,148		
Increase in deferred income taxes	136		405		
Provided From Operations	14,429		12,896		
Funds From Other Sources and Financing Activities					
Increase (Decrease) in debt	(4,179)		465		
Issuance of Common Stock under stock option plans	74		622		
Other	641		307		
	10,965		14,290		
Funds Used					
Cash dividends	2,751		2,637		
Increase in working capital, excluding notes payable	13,873		15,872		
Expenditures for property, plant and equipment	4,014		3,845		
Expenditures for mine development	49		116		
Purchase of Treasury Stock	2,454		_		
Other	37		1,040		
	23,178		23,510		
Change in Cash	\$ (12,213)	\$	(9,220)		

# Consolidated Balance Sheets (Unaudited)

(Dollars in thousands)	April 3, <b>1988</b>	Dec. 31, 1987		April 3, <b>1988</b>	Dec. 31, 1987
Assets			Liabilities and Shareholders' Equity		
Current Assets			Current Liabilities		
Cash	\$ 4,398	\$ 16,611	Notes payable to banks	\$ 24,202	\$ 27,325
Accounts receivable	51,681	44,473	Accounts payable	10,067	10,381
Inventories	107,353	102,998	Other liabilities and accrued		
Prepaid expenses and other			items	16,262	20,387
current assets	13,457	13,675	Dividends payable	_	2,782
Total Current Assets	176,889	177,757	Income taxes	12,513	7,819
Other Assets	29,048	29,942	Total Current Liabilities	63,044	68,694
Property, Plant and Equipment Less allowances for depreciation,	270,476	266,542	Other Long-Term Liabilities	10,220	10,333
depletion and amortization	127,485	121,713	Lang Torm Dahi	04.40=	05.101
	142,991	144,829	Long-Term Debt	24,425	25,481
Goodwill	14,836	14,945	Deferred Income Taxes	20,428	20.292
	\$363,764	\$367,473	Deletion income taxes	20,420	20,292
	=======================================	=====	Shareholders' Equity	245,647	242,673
				\$363,764	\$367,473

## Management's Discussion and Analysis

#### **Results of Operations**

Sales of \$90 million in first quarter 1988 were the highest of any quarter in the Company's history and were 23% above the sales of \$73 million achieved in first quarter 1987. All product lines had significant increases in sales, except defense-related beryllium metal which had no change and ceramic which increased modestly. About \$3 million of the overall increase, however, reflects higher costs of copper, precious metals and other materials which are generally passed through in higher selling prices.

Electronic-related markets served by beryllium alloys, specialty clad metals and precious metal products remain strong. International sales, reflecting strong demand and influenced by the weak dollar, were 29% over last year's first quarter and accounted for 27% of sales. The near-term outlook for these markets supports continued year to year sales gains and manufacturing capacity is sufficient to meet the demand.

First quarter 1988 cost of sales were nearly 25% above those of first quarter 1987, an increase in excess of the related 23% sales growth. Gross margin therefore declined to 30.3% of sales in first quarter 1988 from 31.1% of sales in last year's first quarter. While the shift towards a less profitable product mix and the aforementioned passthrough of higher material costs can account for most of the reduced margin percentage, continued problems in ceramic manufacturing adversely affected the results. The difficulties are primarily associated with assimilating operations transferred from a plant that was closed in 1987. The gross margin rate is expected to improve, commensurate with greater production volumes, as the ceramic problems are resolved.

Selling, administrative and general expenses in first quarter 1988 were \$10.9 million, or 12.1% of sales, an increase of 23% over such expenses of \$8.9 million, or 12.1% of sales, in first quarter 1987. Greater administrative expenses, which account for \$1.3 million of the increase, include higher costs of retirement programs, legal and environmental activities and corporate services.

Research and development expenses in first quarter 1988 of \$2.0 million, or 2.2% of sales, represent an increase of 17% as compared to first quarter 1987 (2.3% of sales). Continued development efforts in beryllium metal near-net-shape techniques account for most of the increase in expenditures. The rate of change will moderate as research and development expenses are expected to total about \$7.1 million for all of 1988 as compared to \$6.5 million in 1987.

Other-net was an expense of \$0.5 million in first quarter 1988 and was essentially zero in first quarter 1987. This

category of expense includes interest income, currency exchange and translation effects, amortization of goodwill, cash discounts and other non-operating items. The principal income items — interest, exchange and investment gains — were lower in first quarter 1988 than in the comparable 1987 period.

Income before taxes of \$13.0 million in first quarter 1988 represents an increase of 14% over first quarter 1987 income of \$11.4 million. Cost and expense increases in excess of the 23% sales increase over last year are not the usual relationship in such circumstances because of the large increases in sales of lower margin product lines.

Income taxes were provided for in first quarter 1988 at an effective rate of 39.0% of pretax income, reflecting the reduced 34% U.S. federal tax rate. In first quarter 1987, the effective tax rate employed was 43.3%. The lower tax rate resulted in first quarter 1988 net income being 23% above last year while pretax income was up 14%.

Earnings of 43 cents per share in first quarter 1988 were 26% greater than the 34 cents per share earned in first quarter 1987. In 1988 first quarter, there were 3% fewer primary shares outstanding, on average, as a result of the Company's stock repurchase program that commenced in fourth quarter 1987. The effect of the lower tax rate was to increase first quarter 1988 earnings per share by about 3 cents

#### **Financial Condition**

Cash balances were drawn down significantly during first quarter 1988 to reduce debt and other liabilities, pay the dividend and to repurchase 98,200 shares of common stock for \$2.4 million.

In addition, during first quarter 1988, accounts receivable increased \$7 million reflecting greater sales and a somewhat slower collection period. Part of the increase is associated with export and international activity. Inventories increased \$4 million which is more than the growth in sales from the previous period (fourth quarter 1987) would indicate. Management's attention to improved inventory control is being intensified.

The pending acquisition of Metals Engineering Co. may result in a small increase in debt during second quarter 1988. Sufficient credit lines are in place.

Long-term debt at the end of first quarter 1988 of \$24 million is 9% of total capital. Although the rate of capital spending is expected to increase from the low first quarter rate, no significant change in long-term debt is expected for financing current operations.

## Notes To Consolidated Financial Statements (Unaudited)

April 3, 1988

#### Note A — Accounting Policies

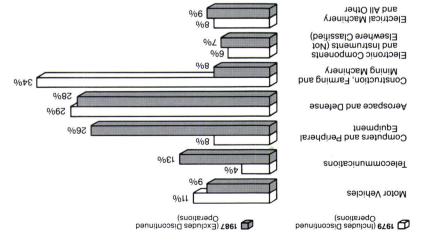
In management's opinion, the accompanying unaudited consolidated financial statements contain all adjustments necessary to present fairly the financial position as of April 3, 1988 and December 31, 1987, and the results of operations and changes in financial position for the three months ended April 3, 1988 and March 29, 1987.

Cost of sales for the first quarter of 1987 reflects a reclassification of certain expenses.

#### Note B — Inventories

(Dollars in thousands)	April 3, <b>1988</b>	Dec. 31, 1987
Principally average cost: Raw materials and supplies In Process Finished	\$ 23,932 65,236 31,607	\$ 22,798 63,258 29,932 115,988
Excess of average cost over LIFO inventory value	13,422 \$107,353	12,990

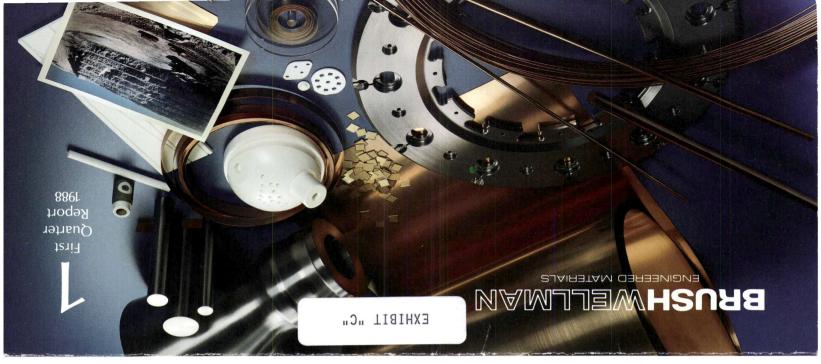
term growth. strengthened Brush Wellman's outlook for longas well as acquisitions and divestitures, has markets. The development of core businesses, graphic comparison of its 1979 and 1987 end pursuit of high growth markets is reflected in this reliability engineered materials. The Company's technology and a worldwide supplier of high Brush Wellman Inc. is a leader in beryllium



Source: Brush Wellman Marketing Research

### ENGINEERED MATERIALS 1200 Hanna Building • Cleveland, Ohio 44115

BRUSHWELLMAN



## To Our Shareholders:

Brush Wellman Inc. completed the second quarter of 1988 in excellent financial condition, with substantial increases in sales and earnings compared with last year.

#### **Financial Review**

Net income of \$8.2 million for the second quarter of 1988 increased 20% over the \$6.8 million earned during the same period last year. Earnings per share for the second quarter of 1988 increased 25% to 45 cents, compared to 36 cents per share earned in the second quarter 1987. Second quarter 1988 sales were \$90 million, an 18% increase over sales of \$76 million for the corresponding 1987 quarter.

For the first six months of 1988, net income was \$16.1 million, an increase of \$2.8 million or 21% from \$13.3 million a year ago. Earnings per share for the six months ended July 3, 1988 of 88 cents increased 26% compared to sixmonth 1987 per share earnings of 70 cents. First half 1988 sales totaled \$179 million, a \$31 million or 21% gain over sales of \$149 million reported for the same period last year.

During the second quarter 1988, we made considerable progress toward increased productivity and yield in the beryllia ceramic and metal systems operations. These operations should have an improved impact on profits in the second half of 1988.

#### **Beryllium Alloys**

Sales of beryllium alloys continued at record levels during the second quarter of 1988, reflecting strength in electronics-related markets. In addition, Brush Wellman sales and earnings are benefiting from many new applications for beryllium alloys in the automotive, telecommunications and computer markets. The new automotive passive restraint system application featured on the back page of this Interim Report is one of these new, exciting and potentially high volume uses for Brush Wellman beryllium alloys. Beryllium alloys are also used in non-electronic applications such as a hydraulic sensor which regulates transmission performance in several new automobile models.

#### **General Services Administration Contract**

On June 30, 1988, the General Services Administration (GSA) awarded Brush Wellman a \$19 million contract for 60,000 pounds of vacuum hot-pressed beryllium billets. The billets will be delivered to the Strategic Materials Stockpile beginning in September, 1988 through 1989. The ore requirements for this contract will be mined at Brush Wellman's beryllium mine in the Topaz-Spor Mountain area of Western Utah and refined at the extraction plant in Delta, Utah. Metallurgical processing, billet fabrication and testing will be carried out in Elmore, Ohio.

#### **Environmental Technology**

Brush Wellman has been recognized for many years as a leader in minimizing the environmental impact of wastes from its manufacturing processes. An \$8 million facility at Elmore, Ohio which was commissioned in 1987, is economically recovering beryllium and copper from such wastes. Our plan is to broaden our recycling operation to include beryllium-containing material from our customers which cannot be recovered by conventional methods. In this way we will be conserving resources, controlling the environmental impact of waste generated by others and contributing to our earnings.

#### **Metals Engineering Acquisition**

In May, 1988, Brush Wellman completed its purchase of Metals Engineering Co. Metals Engineering produces contoured metal strip, including beryllium copper strip, and serves producers of electrical and electronic components. Metals Engineering is expected to add \$5 to \$10 million to Brush Wellman's annual sales, under the direction of the Alloy Division.

#### **Dividend Increase**

The Board of Directors approved a 7% increase in the quarterly cash dividend to a rate of 16 cents a share. The increase, effective for shareholders of record, June 10, 1988, raises the annualized dividend rate to 64 cents, compared to the former rate of 60 cents per share. This will be the 13th consecutive year of increased dividends.

#### Outlook

We expect continued strength in sales and earnings during the second half of 1988. The higher levels of demand in our electronics markets, the growing list of new applications and opportunities for our products, and the GSA Strategic Materials Stockpile contract all point to a positive outlook for the remainder of 1988.

Long term, Brush Wellman is well-positioned to benefit from the global trend toward increasingly demanding applications for engineered materials.

Kaymond a, Foos

Raymond A. Foos

President and
Chief Executive Officer

Henry G. Piper Chairman of the Board

July, 1988

# Consolidated Statements of Income (Unaudited)

	Second Quarter Ended First Half Ende						ed		
(Dollars in thousands except share and per share amounts)		July 3, <b>1988</b>	June 28, 1987		July 3, <b>1988</b>		J	une 28, 1987	
Net sales	\$	89,532	\$	75,686	\$	179,493	\$	148,763	
Costs and expenses: Cost of sales Selling, administrative and general expenses Research and development expenses Exploration expenses Interest expense Other — net.		61,638 11,833 1,406 77 781 317		51,881 9,257 1,656 54 680 149		124,350 22,762 3,375 183 1,582 771		102,216 18,134 3,338 125 1,412 135	
	_	76,052		63,677		153,023	_	125,360	
Income Before Income Taxes Income taxes		13,480 5,257		12,009 5,177		26,470 10,323		23,403 10,110	
Net Income	\$	8,223	\$	6,832	\$	16,147	\$	13,293	
Net income per share of Common Stock	\$ \$ 18	.45 .16 ,397,990	\$ \$ 19	.36 .15 ,068,411	\$ \$ 18	.88 .31 3,405,680	\$ \$	.70 .29 9,009,123	

# Consolidated Statements of Changes in Financial Position (Unaudited)

		First Half	f End	ed	
	1	July 3,	Ju	une 28,	
(Dollars in thousands)		1988		1987	
Funds From Operations					
Net income	\$	16,147	\$	13,293	
Depreciation, depletion and amortization		10,348		9,779	
Amortization of mine development		2,782		1,850	
Increase in deferred income taxes		155		1,343	
Provided From Operations		29,432		26,265	
Funds From Other Sources and Financing Activities					
Increase (Decrease) in debt		(4,781)		2,688	
Issuance of Common Stock under stock option plans		77		3,049	
Other		819		205	
		25,547		32,207	
Funds Used					
Cash dividends		5,685		5,473	
Increase in working capital, excluding notes payable		15,038		16,302	
Expenditures for property, plant and equipment		8,132		6,754	
Expenditures for mine development		143		286	
Purchase of Treasury Stock		2,454		_	
Other		5,660	_	1,312	
		37,112		30,127	
Change in Cash	\$	(11,565)	\$	2,080	

## Consolidated Balance Sheets (Unaudited)

(Dollars in thousands)	July 3, <b>1988</b>	Dec. 31, 1987		July 3, <b>1988</b>	Dec. 31, 1987
Assets			Liabilities and Shareholders' Equity		
Current Assets			Current Liabilities		
Cash	\$ 5,046	\$ 16,611	Notes payable to banks	\$ 24,048	\$ 27,325
Accounts receivable	49,384	44,473	Accounts payable	9,831	10,381
Inventories	109,791	102,998	Other liabilities and accrued		
Prepaid expenses and other	,	,	items	18,678	20.387
current assets	13,971	13.675	Dividends payable	_	2,782
	178,192	177,757	Income taxes	9,823	7,819
Total Current Assets	170,192	177,737	Total Current Liabilities	62,380	68,694
Other Assets	31,595	29.942	iotal Current Liabilities	02,300	00,094
Other Assets	31,393	23,342	Other Long-Term Liabilities	10,291	10.333
Property, Plant and Equipment	276,404	266,542	Other Long-Term Liabilities	10,291	10,555
Less allowances for depreciation,	210,404	200,042	Long-Term Debt	23,977	25,481
depletion and amortization	134,895	121,713	Long Term Debt	20,577	20,401
depietion and amortization			Deferred Income Taxes	20,447	20,292
	141,509	144,829	Dolottod theorne taxes		20,202
Goodwill	16,333	14,945	Shareholders' Equity	250,534	242,673
GOOGNIII			, ,	\$367,629	\$367,473
	\$367,629	\$367,473		\$307,029	φ307,473

## Management's Discussion and Analysis

#### **Results of Operations**

Second quarter 1988 sales of \$90 million reflect continued strong demand from electronics-related markets and represent an increase of 18% over second quarter 1987 sales of \$76 million. All product lines contributed to the sales increase except precious metal products for which sales of the Williams Gold Canadian subsidiary are now excluded pending its divestiture. International sales in second quarter 1988 increased 23% as compared to second quarter 1987.

Beryllium metal sales were significantly higher than in last year's second quarter in which sales were affected by reduced requirements for certain defense programs. Defense spending restraint has resulted in a shift in emphasis toward upgrading existing tactical defense systems. Many of these applications will ultimately employ newly developed near-net-shape technology. Deliveries of beryllium under the recently awarded strategic stockpile contract are expected to begin in a few months.

For the first half 1988, sales were \$179 million, or 21% above first half 1987 sales. As in the second quarter, all product lines contributed with cutting edge and clad metal sales reporting substantial gains. Over \$4 million of the first half 1988 sales increase reflects the pass-through of certain raw material costs in selling prices. Third quarter sales are expected to follow the usual seasonal pattern, and fall below those of the second quarter.

Gross margin (sales less cost of sales) was 31.2% of sales in second quarter 1988 as compared to 31.5% last year. Higher raw material costs and a product mix shift toward lower margin products are the principal causes of the margin decrease. Ceramic manufacturing operations improved over first quarter 1988 performance but continue to adversely affect overall margins.

First half 1988 gross margin was 30.7% of sales as compared to 31.3% of sales in the comparable period last year. Subtracting from sales and from cost of sales the estimated impact of higher 1988 precious metal and copper prices results in an adjusted margin of 31.4% of sales. Large sales increases of cutting edges and clad metal products which have lower than average margins acted to reduce margin percentage. This product mix effect was offset by higher sales volume and currency translations.

Selling, administrative and general expenses in second quarter 1988 were \$11.8 million, or 13.2% of sales, as compared to \$9.3 million, or 12.2% of sales, in second quarter 1987. Selling and distribution expenses increased in proportion to the sales increase while the larger portion of the \$2.5 million increase is attributable to higher administrative expenses including those associated with legal

services, environmental affairs and retiree benefits. Similar factors affected the first half comparison for which 1988 selling, administrative and general expenses increased \$4.6 million, or 26%, over 1987.

Research and development (R & D) expenses in first half of 1988 were essentially unchanged from first half 1987 and were 1.9% of sales as compared to 2.2% of sales last year. Credits for beryllium material previously charged to R & D projects and returned to production caused the relatively low second quarter 1988 expenses. Research and development expenses are expected to be about \$7.0 million for all of 1988 as compared to \$6.5 million in 1987.

Income before taxes amounted to \$13.5 million in second quarter 1988, an increase of 12% over pretax income of \$12.0 million in last year's second quarter. Factors discussed above such as product mix, costs and expenses adversely affected pretax margins which were 15.1% of sales in second quarter 1988 as compared to 15.9% of sales in second quarter 1987. Similar factors pertain to the first half comparison; pretax income increased 13% on a sales increase of 21%.

Income taxes were provided for at an effective rate of 39.0% of pretax income in second quarter and first half 1988. The rate employed for first half 1987 was 43.2%; the difference is due to the 34% U.S. federal tax rate in 1988, reduced from 40% in 1987.

Second quarter 1988 net income of \$8.2 million represents an increase of 20% over net income of \$6.8 million in last year's second quarter. Earnings per share increased 25% to \$.45 from \$.36 as fewer shares are presently outstanding. First half 1988 net income increased 21% to \$16.1 million while per share earnings rose 26% to \$.88.

#### **Financial Condition**

Cash balances were drawn down in first quarter 1988 to reduce debt and other liabilities and repurchase 98,200 shares of common stock for \$2.4 million. Little change in cash or debt occurred in second quarter 1988 during which Metals Engineering Co. was purchased for cash.

Accounts receivable and inventories increased \$5 million and \$7 million, respectively, during first half 1988 reflecting the growth in sales. First half 1988 expenditures for property, plant and equipment were \$8 million and are presently estimated to be about \$20 million for the year.

The increase in other assets since December 31, 1987 is associated with the reclassification of the net assets of the Williams Canadian subsidiary. The increase in goodwill and most of the \$5.7 million "other" funds used reflects the acquisition of Metals Engineering.

## Notes To Consolidated Financial Statements (Unaudited)

July 3, 1988

#### Note A — Accounting Policies

In management's opinion, the accompanying unaudited consolidated financial statements contain all adjustments necessary to present fairly the financial position as of July 3, 1988 and December 31, 1987, the results of operations for the three and six months ended July 3, 1988 and June 28, 1987 and changes in financial position for the six months then ended.

Cost of Sales for the second quarter and first half of 1987 reflects a reclassification of certain expenses.

#### Note B - Inventories

(Dollars in thousands)	July 3, <b>1988</b>	Dec. 31, 1987
Principally average cost: Raw materials and supplies	\$ 25,866 63,343 34,252	\$ 22,798 63,258 29,932
Excess of average cost over LIFO inventory value	123,461	115,988 12,990
,	\$109,791	\$102,998



# New Application for Brush Wellman Engineered Materials

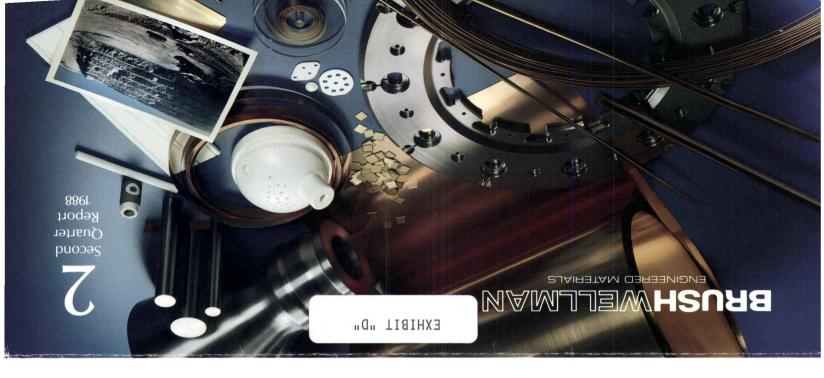
Inflatable passive restraint systems (airbags) are being introduced in a select number of car models this year. The sensor shown in the photograph on the right is an integral part of the system used by one major U.S. automaker. This sensor involves two applications for Brush Wellman Beryllium Nickel Alloy 360 — a tension clip and a spiral spring. The tension clip holds the spring in place. At the moment of impact, the spring unrolls and makes electrical contact, deploying the airbag.

In a similar design used by another major U.S. automaker, Brush Wellman materials are used for the contact as well as the spring. In this design, the contact is a clad metal system consisting of beryllium copper strip with an edge inlay of 24 kt. gold at the contact point. This contact material is manufactured by Brush Wellman's Metal Systems Division. Brush Wellman engineered materials were selected for these critical purch Wellman engineered materials were selected for these critical

airbag sensor applications because of their high reliability and superior mechanical properties.

# 1200 Hanna Building • Cleveland, Ohio 44115

BRUSHWELLMAN ENGINEERED MATERIALS



### To Our Shareholders:

During the third quarter 1988, Brush Wellman Inc. achieved significant increases in sales and net income compared with the third quarter, 1987. Net income of \$6.4 million for the third quarter of 1988 represented a 47 percent increase from the \$4.3 million earned during the same period last year. Earnings per share for the third quarter of 1988 were 35 cents, compared to 23 cents per share earned in the third quarter of 1987. Third quarter 1988 sales were \$85 million as compared to \$73 million in the third quarter last year, an increase of 17 percent.

For the first nine months of 1988, net income was \$22.6 million, an increase of 28 percent from \$17.6 million one year ago. Earnings per share for the nine months ended October 2, 1988 of \$1.23 represent a 32 percent increase over the 93 cents earned during the first nine months of 1987. This reflects the net income increase as well as the impact of share repurchases since 1987. Sales for the first nine months of 1988 totaled \$264 million, a \$43 million or 19 percent increase over sales of \$221 million reported for the same period last year.

Through three quarters of 1988, sales continued at record levels, and orders remain strong. We continue to make progress toward increased productivity and yield in the beryllia ceramic and metal systems operations. Positive contributions to profitability are expected from each of these operations for the remainder of the year. These operations contributed to the increase in gross margin compared to the third quarter 1987.

#### **Strategic Actions**

On September 27, 1988 Brush Wellman announced a series of actions toward achievement of the Company's strategic objectives:

- A plan to divest the Company's cutting edge product line.
- The repurchase of up to 2.9 million shares of Brush Wellman Common Stock, an increase of one million shares from the 1.9 million shares authorized for repurchase in October 1987.
- The merging of the Electronic Components Division with the Metal Systems Division to form the Material Systems Division.
   These actions represent important progress on a long-term strategy to concentrate on our core business, which is specialty

strategy to concentrate on our core business, which is specialt materials and material systems, principally for computer, telecommunications, automotive and defense industries, and to identify and capitalize on opportunities related to our natural resources and our technological and engineering strengths.

#### Cutting Edge Divestiture

Brush Wellman's sudsidiary, Bucyrus Blades, Inc., is a leading supplier of wear-resistant cutting edges and related products for earthmoving and snow removal equipment.

Cutting edge sales for 1988 are expected to be a record \$30 million. Although consistently profitable since it was acquired in 1974, this unit no longer fits the Company's strategic goals and will be divested. Proceeds from the planned sale are expected to exceed book value.

#### Stock Repurchase Program

Over 1,000,000 shares of Brush Wellman Common Stock have been repurchased since October 1987, leaving about 1.8 million to be repurchased as a result of the increased authority. The Company plans to repurchase the shares from time to time in open market or negotiated transactions. The shares acquired will be held for general corporate purposes. Brush Wellman currently has 17.9 million common shares outstanding.

#### Material Systems Division

The Company has established a new operating unit, the Material Systems Division, which combines the operations of the Electronic Components and Metal Systems Divisions. This new division will take advantage of the interrelationships among the beryllia ceramic, precious metal and metal systems products, technologies and markets. This combination should enhance the already improving profitability of these operations.

Andrew J. Sandor, formerly Vice President and General Manager of the Electronic Components Division, has been appointed Vice President and General Manager of the newly formed Material Systems Division.

#### **Defense Logistics Agency Stockpile**

On June 30, 1988 the General Services Administration (GSA) awarded Brush Wellman a \$19 million contract for 60,000 pounds of vacuum hot-pressed beryllium billets for the Strategic Materials Stockpile. During the third quarter, responsibility for the Stockpile was transferred to the Defense Logistics Agency (DLA). Deliveries to the Stockpile began on schedule early in the fourth quarter, 1988, and are expected to continue through 1989.

#### Outlook

The outlook for the remainder of the year is strong. We expect record sales in 1988, and earnings should be second only to 1984.

Longer term, we expect to continue to grow faster than the markets we serve. Our outlook is enhanced by a growing number of new applications in the automotive, electronics, aerospace, telecommunications and other markets as well as the global trend toward highly reliable, high-performance engineered materials.

Raymond A. Foos President and Chief Executive Officer

Kaymond a. Food

Henry of Piper

Henry G. Piper Chairman of the Board

October, 1988

# Consolidated Statements of Income (Unaudited)

	Third Quarter Ended			Nine Months Ended					
(Dollars in thousands except share and per share amounts)	(	Oct. 2, <b>1988</b>		ept. 27, 1987		Oct. 2, 1988		Sept. 27, 1987	
Net sales	\$	85,006	\$	72,656	\$	264,499	\$	221,419	
Costs and expenses: Cost of sales Selling, administrative and general expenses Research and development expenses Exploration expenses Interest expense Other — net.		61,144 11,093 1,621 (60) 667 (86) 74,379		53,103 9,897 1,583 4 692 (130) 65,149	_	185,494 33,855 4,996 123 2,249 685 227,402	_	155,319 28,031 4,921 129 2,104 5	
Income Before Income Taxes Income taxes.  Net Income	\$	10,627 4,219 6,408	\$	7,507 3,151 4,356	\$	37,097 14,542 22,555	\$	30,910 13,261 17,649	
Net income per share of Common Stock	\$ \$ 18	.35 .16 ,353,002	\$ \$ 19	.23 .15 ,114,363	\$ \$ 18	1.23 .47 8,388,864	\$ \$ 19	.93 .44 9,036,511	

# Consolidated Statements of Changes in Financial Position (Unaudited)

		Nine Mont	hs E	nded	
	0	Oct. 2,	S	ept. 27,	
(Dollars in thousands)		1988		1987	
Funds From Operations					
Net income	\$	22,555	\$	17,649	
Depreciation, depletion and amortization		15,618		14,641	
Amortization of mine development		3,078		3,390	
Increase in deferred income taxes		220		2,379	
Provided From Operations		41,471		38,059	
Funds From Other Sources and Financing Activities					
Increase (Decrease) in debt		(10,219)		6,478	
Issuance of Common Stock under stock option plans		122		3,400	
Other		726		894	
		32,100		48,831	
Funds Used					
Cash dividends		8,603		8,312	
Increase (decrease) in working capital, excluding notes payable		(1,050)		23,329	
Expenditures for property, plant and equipment		14,565		12,307	
Expenditures for mine development		391		393	
Purchase of Treasury Stock		7,660		1	
Other		12,380		1,261	
		42,549		45,602	
Change in Cash	\$	(10,449)	\$	3,229	

# Consolidated Balance Sheets (Unaudited)

(Dollars in thousands)	Oct. 2, <b>1988</b>	Dec. 31, 1987		Oct. 2, 1988	Dec. 31, 1987
Assets			Liabilities and Shareholders' Equity		
Current Assets			Current Liabilities		
Cash	\$ 6,162	\$ 16,611	Notes payable to banks	\$ 20,856	\$ 27,325
Accounts receivable	46,834	44,473	Accounts payable	8,863	10,381
Inventories	94,997	102,998	Other liabilities and accrued		
Prepaid expenses and other			items	15,808	20,387
current assets	11,595	13,675	Dividends payable	_	2,782
Total Current Assets	159,588	177.757	Income taxes	10,028	7,819
	,	,.	Total Current Liabilities	55,555	68,694
Other Assets	43,114	29,942		00,000	55,551
	and the second		Other Long-Term Liabilities	10,328	10,333
Property, Plant and Equipment	273,410	266,542			
Less allowances for depreciation,			Long-Term Debt	21,731	25,481
depletion and amortization	134,399	121,713	B / T		
	139,011*	144,829	Deferred Income Taxes	20,512	20,292
Goodwill	15,290	14,945	Shareholders' Equity	248,877	242,673
	\$357,003	\$367,473		\$357,003	\$367,473
fixed Assets \$139.011	<del>4007,000</del>	=====		====	=======================================
(10,000)					

Less Foreign \$139,011 (10,696) \$128,315

## Management's Discussion and Analysis

#### **Results of Operations**

Third quarter 1988 sales increased 17% to \$85 million from \$73 million last year while displaying a typical seasonal decline from the second quarter. All product lines posted strong sales increases except precious metal products which, as reported in the second quarter, now exclude the sales of Williams Gold's Canadian subsidiary.

Sales for the first nine months of 1988 increased 19% to \$264 million from \$221 million last year. International sales increased 16% over the same period and were 25% of total

Fourth quarter sales are expected to remain strong in electronics-related markets but will be offset by the exclusion of Bucyrus Blades' cutting edge sales pending its divestiture. Deliveries of beryllium to the U.S. Government's Strategic Materials Stockpile began in October and will continue through 1989.

Gross margin (sales less cost of sales) improved to 28.1% of sales in third guarter 1988 compared with 26.9% in 1987. Ceramic manufacturing operations have improved significantly over first half 1988 performance. Third quarter margins are typically lower than average due to seasonally lower sales and production volumes.

For the first nine months of both 1988 and 1987, gross margin was 29.9% of sales. This year's largest sales increases were in cutting edges and clad metals, product lines which have lower gross margins. This product mix effect offset improvements and greater volumes in other operations. Also, the passthrough of higher raw material costs, principally copper, tends to reduce the margin percentage. The exclusion of Bucyrus Blades operations beginning in the fourth quarter will result in a more profitable product mix.

Selling, administrative and general expenses in third quarter 1988 were \$11.1 million, or 13.1% of sales, compared to \$9.9 million, or 13.6% of sales, in third guarter 1987. Through nine months, selling, administrative and general expenses increased \$5.8 million over last year and represent 12.8% of sales in 1988 compared to 12.7% in 1987. Administrative expenses account for \$3.5 million of the increase for the nine months. This increase is associated primarily with retiree benefits, international activities, legal services and incentive compensation. Marketing, selling and distribution expenses have increased at a rate less than the growth in sales.

Other-net was \$0.7 million expense through the first nine months of 1988 and was nearly zero during the same period of 1987. This category includes interest income, currency

exchange and translation effects, amortization of goodwill and other non-operating items. Lower interest income in 1988 accounted for most of the change.

Third quarter 1988 income before taxes increased 42% to \$10.6 million, or 12.5% of sales, from \$7.5 million, or 10.3% of sales in 1987, reflecting higher sales and improvements in operations. Income before taxes for the first nine months of 1988 was \$37.1 million as compared to \$30.9 million in 1987, a 20% increase.

Income taxes were provided for at an effective rate of 39.2% for the first nine months of 1988. The rate employed for the comparable 1987 period was 42.9%. The lower rate reflects the 34% U.S. federal tax rate in 1988, reduced from 40% in 1987.

Third quarter 1988 net income increased 47% to \$6.4 million from \$4.3 million in third guarter 1987, while earnings per share increased 52% to \$.35 from \$.23. Nine months 1988 net income increased 28%, and per share earnings increased 32%. The earnings per share increases are greater than the percentage changes in net income because fewer shares were outstanding in the 1988 periods.

#### **Financial Condition**

Funds provided from operations during 1988, supplemented by the \$10 million reduction in beginning cash, were used for the acquisition of Metals Engineering and the repurchase of 298,600 shares of Common Stock as well as for dividends, debt reduction and capital expenditures. The Company repurchased an additional 257,000 shares in October, and approximately 1.8 million shares remain authorized in the recently expanded repurchase program.

Other assets have increased significantly since December 31, 1987, reflecting the 1988 reclassification of the net assets of Bucyrus Blades and Williams Gold of Canada, units that are being offered for sale. Excluding those operations, accounts receivable increased \$5 million and inventories decreased \$1 million since December 31, 1987, reflecting the growth in sales and improvements in inventory management. Long-term debt of \$2.2 million was reclassified into the net assets of Bucyrus Blades.

A new \$50 million revolving credit facility was established October 13, 1988, replacing the previous \$35 million credit agreement. Long-term debt remains relatively low in relation to total capital. Some increase is expected because of share repurchase activity, although proceeds from the business sales may be used to reduce debt.

# Notes To Consolidated Financial Statements (Unaudited)

October 2, 1988

#### Note A — Accounting Policies

In management's opinion, the accompanying unaudited consolidated financial statements contain all adjustments necessary to present fairly, in all material respects, the financial position as of October 2, 1988 and December 31, 1987, the results of operations for the three and nine months ended October 2, 1988 and September 27, 1987 and changes in financial position for the nine months then ended.

Cost of Sales for the third quarter and nine months of 1987 reflects a reclassification of certain expenses.

#### Note B — Inventories

(Dollars in thousands)	Oct. 2, <b>1988</b>	Dec. 31, 1987
Principally average cost: Raw materials and supplies	\$ 21,457 59,679 28,153 109,289	\$ 22,798 63,258 29,932 115,988
Excess of average cost over LIFO inventory value	14,292 \$ 94,997	12,990



## BRUSHWELLMAN

ENGINEERED MATERIALS

1200 Hanna Building • Cleveland, Ohio 44115



Investor Relations Department Brush Wellman Inc. 1200 Hanna Building Cleveland, OH 44115

Currently, nearly one thousand share-holders are participating in this plan.
For further information about the Automatic Dividend Reinvestment Plan, please

Wellman. The plan is administered by Ameritrust Company.

The program becomes automatic upon enrollment. Ameritrust receives your dividend and cash contributions and uses the funds to purchase shares of Brush Wellman common stock on the open market. Full and fractional shares are credited to the shareholder's account.

Brokerage fees and bank service charges are paid by Brush Wellman. The plan is administered by Ameritrust Company.

The program becomes automatic upon enrollment, Ameri-

Brush Wellman offers shareholders the opportunity to automatically reinvest dividends toward the purchase of additional shares of Brush Wellman common stock. Shareholders also have the option to purchase additional common shares by making voluntary cash contributions in increments of \$10 to \$5,000 each quarter.

Automatic Dividend Reinvestment Nearly 1,000 Shareholders Participate

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